

Claims

[c1] An electrical connector, comprising:

- a. a connector body;
- b. pins extending through the connector body;
- c. a spacer cooperating with the connector body and through which the pins extend;
- d. printed circuit board having solderless connectors thereon and having at least one light emitting diode;
- e. a lens piece having at least one lens; and
- f. a collar capable of engagement with the connector body;

wherein the pins are connectable to lead wires and capable of contacting the solderless connections on the printed circuit board to provide connection thereto.

[c2] The electrical connector of claim 1, wherein the printed circuit board is removable and replaceable.

[c3] The electrical connector of claim 1, wherein the lens piece is removable and replaceable.

[c4] The electrical connector of claim 1, wherein the lens piece cooperates with the at least one light emitting diode on the printed circuit board.

- [c5] The electrical connector of claim 1, wherein the collar secures the lens piece, the printed circuit board, and the spacer when in engagement with the connector body.
- [c6] The electrical connector of claim 1, wherein the pins are held in electrical connection with the solderless connectors when the collar is engaged with the connector body.
- [c7] The electrical connector of claim 1, wherein the collar comprises a threaded portion and the connector body comprises a threaded portion, wherein the collar threaded portion is capable of engagement with the connector body threaded portion.
- [c8] The electrical connector of claim 1, wherein the printed circuit board comprises keying elements capable of co-operating with the spacer to properly align the printed circuit board with the pins extending through the spacer.
- [c9] A remote diagnostic unit having at least one light emitting diode for a vehicle diagnostic system, comprising:
 - a. a printed circuit board comprising solderless connectors and at least one light emitting diode;
 - b. a connector body;
 - c. pins extending through the connector body for cooperation with the solderless connections;
 - d. a spacer between the printed circuit board and the

connector body;

e. a lens piece having at least one lens for cooperation with the at least one light emitting diode on the printed circuit board; and

f. a collar capable of engagement with the connector body to house the lens, the printed circuit board, and the spacer.

- [c10] The remote diagnostic unit of claim 9, wherein the printed circuit board is removable and replaceable.
- [c11] The remote diagnostic unit of claim 9, wherein the lens piece is removable and replaceable.
- [c12] The remote diagnostic unit of claim 9, wherein the lens piece cooperates with the at least one light emitting diode on the printed circuit board.
- [c13] The remote diagnostic unit of claim 9, wherein the collar secures the lens piece, the printed circuit board, and the spacer when in engagement with the connector body.
- [c14] The remote diagnostic unit of claim 9, wherein the pins are held in electrical connection with the solderless connectors when the collar is engaged with the connector body.
- [c15] The remote diagnostic unit of claim 9, wherein the collar

comprises a threaded portion and the connector body comprises a threaded portion, wherein the collar threaded portion is capable of engagement with the connector body threaded portion.

- [c16] The remote diagnostic unit of claim 9, wherein the printed circuit board comprises keying elements capable of cooperating with the spacer to properly align the printed circuit board with the pins extending through the spacer.